

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AZ03-032WODA	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/KR 2004/000999	(Earliest) Priority Date (<i>day/month/year</i>) 13 May 2003 (13.05.2003)	International filing date (<i>day/month/year</i>) 30 April 2004 (30.04.2004)
Applicant <div style="text-align: center;">LG ELECTRONICS INC.</div>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☒ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Continuation No. IV:**Text of the abstract****(Continuation of item 5 of the first sheet)**

Disclosed is a rotary compressor having two compression capacities. The rotary compressor includes: a driving shaft (18) being rotatable clockwise and counterclockwise, and having an eccentric portion (13a) of predetermined size; a cylinder (21) forming a predetermined inner volume; a roller (22) installed rotatably on an outer circumference of the eccentric portion (19a) so as to contact an inner circumference of the cylinder (21), performing a rolling motion along the inner circumference and forming a fluid chamber (29) to suck and compress fluid along with the inner circumference; a vane (23) installed elastically in the cylinder to contact the roller continuously; a first bearing (24) installed in the cylinder (21), for supporting the driving shaft (13) rotatably; a second bearing (25) for rotatably supporting the driving shaft (13) and preliminarily storing the fluid to be sucked; discharge ports (26) communicating with the fluid chamber (29); and a valve assembly (110) having openings separated by predetermined angle from each other, for allowing the openings (111,112,113) to selectively communicate with the second bearing (25) at a predetermined position of the fluid chamber (29) according to rotation direction of the driving shaft (18), wherein compression spaces that have different volumes from each other are formed in the fluid chamber (29) according to the rotation direction of the driving shaft (13) so that two different compression capacities are formed.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/000999

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: F04C29/00, F04C29/06, F04C15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: F04C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4598559 A (TOMAYKO) 8 July 1986 (08.07.1986) <i>abstract; figures 1-6; column 2, line 53 - column 3, line 38.</i>	1, 2, 4, 6, 7, 10, 14, 16, 18, 19, 25, 26
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A	Patent Abstract of Japan vol. 12, no. 269 (M-723) 27 July 1988 (27.07.1988) & JP-A- 63050693 (TOSHIBA CORP.) 03.03.1988 <i>abstract; figure 1.</i>	1, 2, 3
	--	
A	Patent Abstract of Japan vol. 10, no. 238 (M-508) 16 August 1986 (16.08.1986) & JP-A- 61070193 (MITSUBISHI HEAVY IND. LTD) 10.08.1986 <i>abstract; figures 1-4.</i>	1, 2, 6, 7, 9, 10, 14, 18, 19, 25, 31
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
5 October 2004 (05.10.2004)Date of mailing of the international search report
18 October 2004 (18.10.2004)Name and mailing address of the ISA/ AT
Austrian Patent Office
Dresdner Straße 87, A-1200 Vienna

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 2004/000999

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3723024 A (SAWAI) 27 March 1973 (27.03.1973) <i>abstract; figures 1-3; column 4, line 8 - column 5, line 30; column 5, lines 63 - 67; column 6, lines 11 - 26.</i>	1, 2, 6, 7, 18, 25, 26, 45, 47
A	-- US 4702088 A (OZU) 27 October 1987 (27.10.1987) <i>abstract; figures 3-6, 9; column 2, line 57 - column 3, line 67; column 7, lines 7-27.</i>	1, 2, 37, 38, 45, 47
A	-- US 4367638 A (GRAY) 11 January 1983 (11.01.1983) <i>abstract; figures 1-4; column 2, line 25 - column 3, line 33.</i> ----	1, 2, 4

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR 2004/000999

Patent document cited in search report			Publication date		Patent family member(s)		Publication date
A					none		
US	A	3723024	1973-03-27		none		
US	A	4367638	1983-01-11		CA	A	1146370
							1989-08-27
US	A	4598559	1986-07-08		KR	B	8903230
					IT	B	1190022
					DK	A	254086
					FR	A	2582744
					BR	A	8602358
							1989-04-14
US	A	4702098	1987-10-27		IT	B	1191837
					JP	A	62003180
							1987-01-09